

Research Note

Strongyle Control after Multiyear Use of Ivermectin in Horses on a Farm in Central Kentucky

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ABSTRACT: Counts of strongyle eggs per gram of feces (epg) were determined biweekly for an 8-wk period in 1991 and 1992 for 83 thoroughbred horse mares ($N = 21/\text{yr}$) and yearlings ($N = 20\text{--}21/\text{yr}$) on a farm in central Kentucky. Historically, horses on this farm have been on a regular deworming program for nearly 5 decades. Ivermectin has been used approximately every 8 wk since 1983 when it was first marketed. There was occasional usage of pyrantel pamoate between routine ivermectin treatments. For the 2 evaluation periods, strongyle epg counts for mares were all negative and for yearlings were all negative except pretreatment for 1 yearling (epg = 10) in 1991 and 3 yearlings (epg = 10, 10, and 30) in 1992.

KEY WORDS: horses, strongyles, control, ivermectin.

Chemotherapy is the primary method for control of internal parasites of equids. Opinions vary regarding frequency of treatment (e.g., every 8 wk or strategically) and as to whether classes of compounds should be alternated fast (e.g., every 8 wk) or slow (e.g., annually) (Drudge et al., 1989). There is general consensus, however, that 1 class of compound should not be used for indefinite periods. Recently, there has been opportunity to evaluate a parasite control program in thoroughbred horses on a farm in central Kentucky where the same compound has been used for several years.

This farm's management has made a program of parasite control a priority for several decades (E. T. Lyons, unpubl. data, 1992). Ivermectin has been given to the horses about every 8 wk since 1983. Occasionally, once or twice a year, pyrantel pamoate was given in between the routine ivermectin treatments for removal of tapeworms (i.e., at about 4 wk after and before an 8-wk ivermectin treatment).

For a pre- and posttreatment period in 1991 and 1992, fecal samples were collected from 83 horses (mares: $N = 21/\text{yr}$; yearlings: $N = 21$ in 1991 and 20 in 1992). Collections were on the day of treatment (2 April 1992; 30 April 1992) and every 2 wk for 8 wk posttreatment. Strongyle epg counts were determined on all fecal samples (Lyons et al., 1976). In addition, in 1991 stron-

gyle larval counts per gram of feces (lpg) (Drudge et al., 1963) were completed on a composite culture of feces from a group of 10 mares and a similar one for a group of 10 yearlings.

The epg counts for all mares were negative for both sample periods. Also, the lpg counts for the composite fecal cultures for the 10 mares in 1991 were negative. For the yearlings, epg counts were negative except pretreatment (day 0) for 1 yearling (epg = 10) in 1991 and for 3 yearlings (epg = 10, 10, and 30) in 1992. The lpg counts for the group of 10 yearlings in 1991 were negative except for the pretreatment day (day 0), when 2 small strongyle larvae were found in the culture.

The strongyle epg counts were negligible overall. These findings for this particular farm are of interest because, after usage for 8 (1991) and 9 (1992) yr, ivermectin continues its highly effective control of strongyles. As already stated, parasite control on the farm was excellent even before use of ivermectin. This factor, no doubt, has contributed to the effectiveness of ivermectin. It should be reemphasized that, because of potential or actual drug resistance, most parasitologists, including the present authors, do not advocate exclusive use of a single antiparasitic compound or class of compounds.

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